

# Spread the Word NOT the ANS!



## Activity

Students design an informational brochure or poster to teach the general public about aquatic nuisance species.

**Grade level:** 6-8 (can be adapted to any grade level)

**Subjects:** Art, Ecology, Science

**Setting:** Classroom

**Duration:** 1-2 class periods

**Key Terms:** Aquatic nuisance species, invasive, nuisance

## Objectives

- Students will examine a variety of ANS information campaigns and gauge their effectiveness.
- Students will summarize and organize information to create an informative brochure or poster.
- Students will use writing and visual art skills to create a brochure or poster that will educate and inform others about aquatic nuisance species.

## Materials

- Internet
- Aquatic nuisance species fact sheets
- Example brochures
- ANS Research Worksheet
- Poster board or paper, markers, pencils etc.

## Background

The introduction and establishment of invasive or nuisance species is considered one of the greatest threats to global biodiversity, second only to habitat destruction. Invasive species have been identified as the cause in decline of at least 48% of species listed as threatened or endangered under the United States Endangered Species Act. Aquatic nuisance species may reduce the diversity and abundance of native species, degrade aquatic habitats, threaten water quality and availability, alter important ecological processes and pose a general threat to commercial, agricultural and recreational industries. An estimated \$120 billion is spent annually in the United States to deal with the multitude of problems associated with Invasive Species. Aquatic nuisance species are introduced or spread to new locations a number of ways, but humans remain the primary vector of dispersal. Prevention is the most cost effective

means of managing invasive species. One of the most effective ways to prevent or reduce the introduction, spread and impact of invasive species is public education.

Call to action brochures and public service announcements are one of many tools used to teach the public about the ANS problem. Increasing public knowledge of ANS leads to a greater awareness of what ANS are, how they threaten aquatic resources and what can be done to stop their spread. Educating family, friends and neighbors about ANS greatly increases the chances of protecting our waters against these unwanted invaders.

### **Preparation**

- Provide each student with *ANS Research Worksheet*.
- Quickly review how ANS are spread from one water resource to another, the impacts of ANS on native wildlife and water resources and steps each person can take to prevent the spread of ANS (see “Global Invaders” and “Prevent the Pathway” activities).
- OR, invite a fisheries biologist to visit and talk with the students about ANS.

### **Directions**

- Divide students into small groups (2-3), or encourage students to work independently.
- Show the students example brochures and posters. As a class, discuss these materials and their functions. Who are these resources for? What is their objective? Why are they important?
- Assign each student an aquatic nuisance species, or allow students to select one ANS to research in more detail.
- Students will use ANS fact sheets and/or the internet to research their aquatic nuisance species. From their research, students will answer the questions on the *ANS Research Worksheet*.
- After becoming experts on their aquatic nuisance species, have the students use information on *ANS Research Worksheet* to create their own informational brochure or poster that will inform the public about their aquatic nuisance species.
- If the students are in a computer class or have regular computer access, have them design their brochures or poster using a computer program.

### **Evaluation**

- Each student or group of students will present their brochure or poster to the rest of the class.
- Following each presentation, discuss the following as a group:
  - Is the brochure/poster clear and easy to read?
  - Is all of the information present on brochure/poster?
  - Does it communicate the message clearly?
  - What do you like about the brochure/poster, what could be improved?

## **Extensions**

- Have students share their posters/brochures with the rest of the school by highlighting an “ANS-of-the-month” in the school library, media center or on a school bulletin board.
- Have students set up an art gallery in the classroom and invite other classes or parents to view the brochures and posters.
- If your school has a webpage, scan the posters and brochures and post them online so that their research will benefit an even broader audience.
- Turn posters/brochures into a short commercial or public service announcement.

## **Resources**

- [www.invasivespeciesinfo.gov](http://www.invasivespeciesinfo.gov)
- [www.invasivespeciesinfo.gov/aquatics/main.shtml](http://www.invasivespeciesinfo.gov/aquatics/main.shtml)
- [www.oregon.gov/OISC/Pages/most\\_dangerous.aspx](http://www.oregon.gov/OISC/Pages/most_dangerous.aspx)
- <http://wdfw.wa.gov/ais/species.html>

## **Washington State Science & Environmental Science Standards:**

6-8 LS2D – Ecosystems are continuously changing. Causes of these changes include nonliving factors such as the amount of light, range of temperatures, and availability of water, as well as living factors such as the disappearance of different species through disease, predation, habitat destruction and overuse of resources or the introduction of new species.

6-8 LS2E – Investigations of environmental issues should uncover factors causing the problem and relevant scientific concepts and findings that may inform an analysis of different ways to address the issue.

ESE Standard 1 - Students develop knowledge of the interconnections and interdependency of ecological, social, and economic systems. They demonstrate understanding of how the health of these systems determines the sustainability of natural and human communities at local, regional, national, and global levels.

ESE Standard 2; The Natural and Built Environment – Students engage in inquiry and systems thinking and use information gained through learning experiences in, about, and for the environment to understand the structure, components, and processes of natural and human-built environments.

# Spread the Word! *ANS Research Worksheet*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Aquatic Nuisance Species (ANS): \_\_\_\_\_

**When completing the worksheet be sure to cite the website and author of each answer on the back of this page.**

1. What is the common name of your aquatic nuisance species? \_\_\_\_\_
2. What is the scientific name of your aquatic nuisance species? \_\_\_\_\_
3. What is your ANS (i.e., plant animal etc.)? \_\_\_\_\_
4. Describe three characteristics of your aquatic nuisance species.
  - a) \_\_\_\_\_
  - b) \_\_\_\_\_
  - c) \_\_\_\_\_
5. Where did your ANS come from originally? \_\_\_\_\_
6. Where can your ANS be found currently (geographic range)? \_\_\_\_\_  
\_\_\_\_\_
7. How was your ANS introduced to that range? \_\_\_\_\_  
\_\_\_\_\_
8. List three impacts your ANS has on the natural environment.
  - a. \_\_\_\_\_  
\_\_\_\_\_
  - b. \_\_\_\_\_  
\_\_\_\_\_
  - c. \_\_\_\_\_  
\_\_\_\_\_
9. List three ways the spread of your ANS can be prevented.
  - a) \_\_\_\_\_  
\_\_\_\_\_
  - b) \_\_\_\_\_  
\_\_\_\_\_
  - c) \_\_\_\_\_  
\_\_\_\_\_
10. Give one cool fact about your aquatic nuisance species. \_\_\_\_\_  
\_\_\_\_\_

# Spread the Word! *Citations*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Aquatic Nuisance Species (ANS): \_\_\_\_\_

1. \_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_  
\_\_\_\_\_

4. \_\_\_\_\_  
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5. \_\_\_\_\_  
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7. \_\_\_\_\_  
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8. \_\_\_\_\_  
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9. \_\_\_\_\_  
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10. \_\_\_\_\_  
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